

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 April 2004 (08.04.2004)

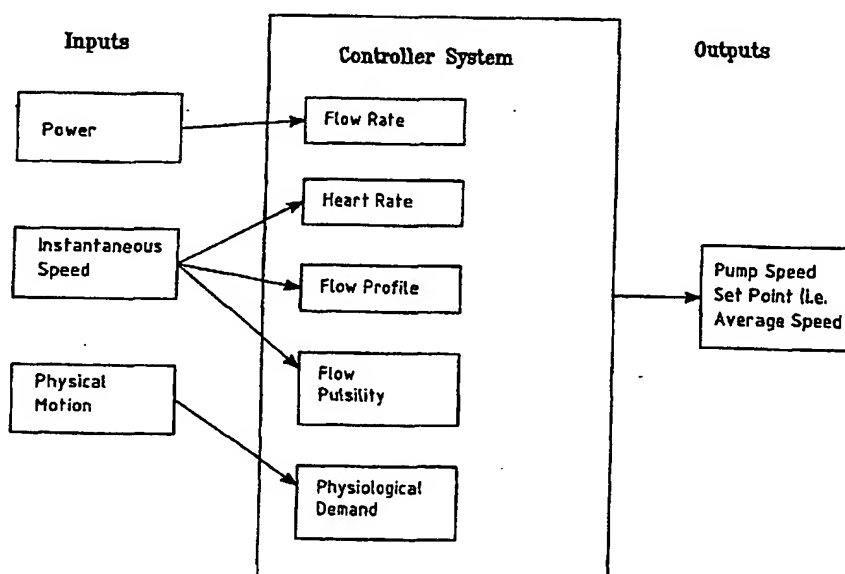
PCT

(10) International Publication Number
WO 2004/028593 A1

- (51) International Patent Classification⁷: A61M 1/10 (74) Agent: HODGKINSON AND MCINNES; Level 3, 20 Alfred Street, Milsons Point, NSW 2061 (AU).
- (21) International Application Number: PCT/AU2003/001281 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 30 September 2003 (30.09.2003) (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 2002951685 30 September 2002 (30.09.2002) AU (71) Applicant (*for all designated States except US*): VEN-TRASSIST PTY LTD [AU/AU]; 126 Greville Street, Chastwood, NSW 2067 (AU).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): AYRE, Peter, Joseph [AU/AU]; 31A Devonshire Street, Crows Nest, NSW 2065 (AU).
- Published:
— with international search report

[Continued on next page]

(54) Title: PHYSIOLOGICAL DEMAND RESPONSIVE CONTROL SYSTEM



(57) **Abstract:** A demand responsive physiological control system for use with a rotary blood pump; said system including a pump controller which is capable of controlling pump speed of said pump; said system further including a physiological controller, and wherein said physiological controller is adapted to analyse input data relating to physiological condition of a user of said pump; and wherein said physiological controller determines appropriate pumping speed and sends a speed control signal to said pump controller to adjust pump speed; said system further including a physiological state detector which provides said input data indicative of at least one physiological state of said user, in use, to said physiological controller.

WO 2004/028593 A1